

Our ref: KON-1818

Client's ref: P-6211-001-0000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of: K. NAKAMURA et al : Art Unit: 1752

Appln. No. : 10/657,509 :  
Examined : September 8, 2003 : Examiner: T. Chea  
Title : SILVER SALT PHOTOTHERMO- :  
GRAPHIC DRY IMAGING :  
MATERIAL :

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DECLARATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

S i r:

I, Kiyoshi Fukusaka, hereby declare and say as follows:

1. I am one of the named Inventors in the above-identified Application.

2. I received a Masters Degree in Chemistry from the University of Tsukuba in 1997. Since that time, I have been employed by Konica Corporation (now Konica Minolta Medical & Graphic, Inc.) the Assignee of the above-identified Application. During my employment at Konica, I have engaged in the research and development of photographic materials.

3. I am aware of the fact that the Examiner has rejected the claims in this Application based on a combination of Fukui, Patent Specification 1,543,266 and Oya. I previously submitted a Declaration dated March 22, 2005 wherein I tested the material of Fukui against the Invention disclosed in the above-identified Application to demonstrate the difference between the reducing agent of Formula (1) of the present Invention and the compounds of Formula (1) of Fukui. I am also aware that the Examiner criticized the previous data since only a compound of Formula (1-1) of the present Invention was used to compare the results of the present Invention against the results in Fukui. In order to test more compounds that fall within Formula (1) of the present Invention, additional tests have been performed and are reported herein. These tests

were performed by me or under my direct supervision and control.

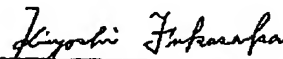
4. As before, I chose photothermographic material 7 disclosed in Table 1 at paragraph [0273] of Fukui. Photothermographic material 7 of Fukui was chosen as comparative material since it is considered to be representative of the teachings of Fukui. It is noted that material No. 7 in Table 1 of Fukui contained a reducing agent labeled 1-1 and that this material does not fall within the scope of Formula (1) of the present Invention. In the tests reported herein, the material prepared in accordance with Sample 7 of Fukui is labeled as Sample 5. This follows the same numbering sequence used in my previous Declaration. In Table 6 attached hereto, the amount of reducing agent of Formula 1-1 of Fukui and the amount of hindered phenol of Formula 2-35 of Fukui is recited. Sample 5, Sample 7 in Fukui, was prepared in accordance with Example 1 of Fukui using the amount of materials as shown in Table 6.

5. Photothermographic materials of the present Invention were prepared similar to Sample 5 herein, (Sample 7 in Fukui) except that compound 1-1 of Fukui was replaced with an equimolar amount of reducing agents as shown in Table 6. These reducing agents fall within Formula (1) of the present Invention. I specifically chose the various reducing agents for Samples 7-14 so as to vary the chemical composition of  $R_{11}$  and  $R_{12}$  as shown in Formula (1) of the present Invention. In these materials made in accordance with the present Invention, Samples 7-14, the same hindered phenol as used in Fukui was employed. The purpose of using the same hindered phenol was to maintain constant the hindered phenol and to allow the tests to focus on the variations in the chemical composition of the compound of Formula (1) of the present Invention.
6. Each of the Samples prepared herein were tested in accordance with the present Invention as recited on pages 124-127 and the results of these evaluations are shown in Table 7. As shown in Table 7, the inventive photothermographic materials, Samples 7-14, achieved improved photographic characteristics and superior

image lasting qualities compared to Sample 5, the material made in accordance with Fukui. It can be seen from Table 7, that reduced fog densities, enhanced sensitivities and maximum densities, and superior image lasting qualities are obtained for each of the compounds that fall within Formula (1) of the present Invention.

7. I find these results to be surprising and unexpected. I believe that one of skill in the art would likewise find these results to be surprising and unexpected.
8. It is declared by undersigned that all statements made herein of undersigned's own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the U.S. Code; and that such willful false statements

may jeopardize the validity of this Application or any  
patent issuing thereon.

  
Kiyoshi Fukusaka

Dated: This 9<sup>th</sup> day of May, 2006.

DCL/mr

Table 6

Sam- ple No.	Reducing Agent ( $\alpha$ ) ( $10^{-1}$ mol/ mol Ag)	Hindered Phenol ( $\beta$ ) ( $10^{-2}$ mol/ mol Ag)	$\beta/\alpha$ (molar ratio)	Remark
5	1-1* (4.0)	2-35* (3.2)	0.08	Comp.
7	1-1 (4.0)	2-35* (3.2)	0.08	Inv.
8	1-2 (4.0)	2-35* (3.2)	0.08	Inv.
9	1-7 (4.0)	2-35* (3.2)	0.08	Inv.
10	1-12 (4.0)	2-35* (3.2)	0.08	Inv.
11	1-13 (4.0)	2-35* (3.2)	0.08	Inv.
12	1-15 (4.0)	2-35* (3.2)	0.08	Inv.
13	1-40 (4.0)	2-35* (3.2)	0.08	Inv.
14	1-43 (4.0)	2-35* (3.2)	0.08	Inv.

1-1\*: compound (1-1) of Fukui

2-35\*: compound (2-35) of Fukui

Table 7

Sample No.	Unaged Sample							Image Lasting Quality (810 nm)			Remark
	Fog (810 nm)	Sensitivity			D <sub>max</sub>		h <sub>ab</sub> (810 nm)	D <sub>min</sub> (%)	D <sub>max</sub> (%)	h <sub>ab</sub>	
		810 nm	814 nm	810 nm	814 nm						
5	0.230	100	80	101	82	193	151	81	165	Comp.	
7	0.170	121	118	122	120	220	101	97	230	Inv.	
8	0.190	118	113	119	113	210	106	92	215	Inv.	
9	0.170	120	118	121	119	220	101	97	225	Inv.	
10	0.175	123	121	122	120	235	103	95	240	Inv.	
11	0.190	117	113	118	112	210	107	91	215	Inv.	
12	0.175	123	120	123	121	225	103	95	230	Inv.	
13	0.180	120	116	120	118	225	103	95	230	Inv.	
14	0.180	122	118	122	120	230	104	94	235	Inv.	